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EXAMINER

ABU ALI, SHUANGYI

ART UNIT	PAPER NUMBER
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1793

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07/06/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/531,257	Applicant(s) PRUETT ET AL.	
	Examiner SHUANGYI ABU ALI	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-9,11,12,16-23,26-38,40-53,55 and 56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-9,11-12,16-23,26-38,40-53,55 and 56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Status of Claims

Claims 1, 3, 5-9, 11-12, 16-23, 26-38, 40-53 and 55-56 remain for examination wherein claims 1, 3, 6, 20-21, 38, 43, 47, 49, 51, 53 and 55-56 are amended.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 3, 5-7, 9, 11-12, 16, 18-19, 47-53 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/51815 to Husband et al.

Regarding claims 1, 16 and 18, Husband et al. disclose a kaolin composition having a shape factor of 30, wherein 91% of the particles having an esd of less than 1 μm and 44 % of the particles having an esd of less than 0.25 μm (page 41, lines 20-23).

The reference differs from Applicant's recitations of claims by not disclosing identical ranges (the shape factor range from about 32 to 49). However, "about " permits some tolerance. In re Ayers, 154 F 2d 182, 69 USPQ 109. The reference discloses close ranges, and close ranges have been held to establish prima facie obviousness.

Regarding claim 3, Husband et al. disclose that the kaolin coating composition for paper is preferred in a solid concentration of 60-70% (page 25, lines 13-19). Although Husband et al. are silent about the viscosity of 63% solid kaolin slurry composition as set forth by applicant in claim 3, it would expected that the kaolin slurry of Husband et al. has the viscosity as applicant set forth in claim 3, since the viscosity of kaolin composition is determined by its constituent.

Regarding claims 5- 9, Husband et al. disclose the kaolin composition comprising 97% of the particles having an esd less than 2 μm (page 41, line 18). Husband et al. are silent about the kaolin composition having 98% of particles with an esd less than 2 μm as applicant set forth in claim 8. However, " about " permits some tolerance. In re Ayers, 154 F 2d 182, 69 USPQ 109. Thus Husband et al. disclosure meets the limitation of claim 8.

Regarding claims 11 and 12, Husband et al. disclose that 91% of the particles having an esd of less than 1 μm (page 41, line 20).Husband et al. are silent about the kaolin composition having 92% of particles with an esd less than 1 μm as applicant set forth in claim 12. However, "about " permits some tolerance. In re Ayers, 154 F 2d 182, 69 USPQ 109. Thus Husband et al. disclosure meets the limitation of claim 12.

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Regarding claim 19, Husband et al. disclose that the kaolin composition comprising 44% of the particles having an esd of less than 0.25 μ m (page 41, lines 21 and 22).

Regarding claims 47 and 56 Husband et al. disclose a paper coating grade kaolin slurry composition having a shape factor of 30, wherein 91% of the particles having an esd of less than 1 μ m and 44 % of the particles having an esd of less than 0.25 μ m (page 41, lines 17-23) coated on a web of base paper (page 42, line 7).

The reference differs from Applicant's recitations of claims by not disclosing identical ranges (the shape factor range from about 32 to 49). However, "about " permits some tolerance. In re Ayers, 154 F 2d 182, 69 USPQ 109. The reference discloses close ranges, and close ranges have been held to establish prima facie obviousness.

Although Husband et al. are silent about gloss of the paper as applicants set forth in claim 56. It would be expected that the paper coating of the Husband et al. to have the same properties, since the gloss of the paper is determined by the constituents of the composition.

Regarding claim 48, Husband et al. disclose that the kaolin composition comprising 97% of the particles having an esd less than 2 μ m (page 41, line 18).

Regarding claim 49, Husband et al. disclose that the kaolin coating composition for paper is preferred in a solid concentration of 60-70% (page 25, lines 13-19).

Although Husband et al. are silent about the viscosity of 63% solid kaolin slurry composition as set forth by applicant in claim 3, it would expected that the kaolin slurry

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of Husband et al. has the viscosity as applicant set forth in claim 3, since the viscosity of kaolin composition is determined by its constituent.

Regarding claim 50, Husband et al. disclose that the calcium carbonate is used in paper coating composition (page 16, line 12).

Regarding claim 51, Husband et al. disclose a method of coating a paper substrate by coating the paper substrate with a kaolin composition comprising a kaolin composition, which has a shape factor of 30, 91% of the particles having an esd of less than 1 μm and 44 % of the particles having an esd of less than 0.25 μm (page 42, lines 6-9 and page 41, lines 20-23).

The reference differs from Applicant's recitations of claims by not disclosing identical ranges (the shape factor range from about 32 to 49). However, "about " permits some tolerance. In re Ayers, 154 F 2d 182, 69 USPQ 109. The reference discloses close ranges, and close ranges have been held to establish prima facie obviousness.

Regarding claim 52, Husband et al. disclose that the kaolin composition comprising 97% of the particles having an esd less than 2 μm (page 41, line 18).

Regarding claim 53, Husband et al. disclose that the kaolin coating composition for paper is preferred in a solid concentration of 60-70% (page 25, lines 13-19).

Although Husband et al. are silent about the viscosity of 63% solid kaolin slurry composition as set forth by applicant in claim 3, it would expected that the kaolin slurry of Husband et al. has the viscosity as applicant set forth in claim 3, since the viscosity of kaolin composition is determined by its constituent.

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Claims 1, 3, 5-9, 11-12, 17, 20-23, 26-36, 38, 40-46 and 55 rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/59840 to Golley et al.

Regarding claims 1, 17 and 20, Golley et al. disclose a kaolin composition having a shape factor at least 50 (page 13, line 27), at least 72 weight % of particles having an esd less than 1 μm (page 12, line 29) and 35 weight % of particles having an esd less than 0.25 μm (page 12, lines 27 and 28).

The reference differs from Applicant's recitations of claims by not disclosing identical ranges (the percentage of the particle size and the shape factor of about 32 to 49). However, the reference discloses "overlapping" ranges and close range ("about" permits some tolerance.) Close and overlapping ranges have been held to establish prima facie obviousness.

Regarding claim 3, Golley et al. disclose a composition as set forth above, but they are silent about the viscosity of kaolin composition as set forth by applicant in claim 3. It would be expected that the kaolin slurry of Golley et al. has the viscosity as applicant set forth in claim 3, since the viscosity of kaolin composition is determined by its constituent.

Regarding claims 5-9, 11-12, Golley et al. disclose a kaolin composition having at least 72 weight % of particles having an esd less than 1 μm (page 12, line 29).

Regarding claim 21, Golley et al. disclose a method of making a kaolin composition:

1) Grinding a degrittied kaolin slurry (page 14, line 20) composition comprising at least 50 weight % of particles having an esd less than 2 μm (page 13, line 31 to page 14,

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line 1); and 2) Classifying the grounded kaolin slurry to obtain a composition having a shape factor at least 50 and at least 85- 95% weight % particles having an esd less than 2 μm (page 16, lines 2-6 and page 12, lines 24-25).

The reference differs from Applicant's recitations of claims by not disclosing identical ranges (the shape factor range from about 32 to 49). However, "about " permits some tolerance. In re Ayers, 154 F 2d 182, 69 USPQ 109. The reference discloses close ranges, and close ranges have been held to establish prima facie obviousness .

Regarding claim 22, Golley et al. disclose sedimentary kaolin used in the process of making pigment (page 5, line 22).

Regarding claim 23, Golley et al. disclose a method of making a kaolin pigment composition as set forth above, but they are silent about the viscosity of kaolin composition as set forth by applicant in claims 23-25. It would expected that the kaolin slurry of Golley et al. has the viscosity as applicant set forth in claim 3, since the viscosity of kaolin composition is determined by its constituent.

Regarding claim 26, Golley et al. disclose that around 20%-35 weight% of particles having an esd less than 0.25 μm (page 8, line 28).

Regarding claim 27, Golley et al. disclose that at least 50 weight% of particles having an esd less than 2 μm (page 8, lines 1-2)

Regarding claim 28, Golley et al. disclose that the shape factor of the raw kaolin composition is at least 15 (page 7, line 31).

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Regarding claim 29, Golley et al. disclose that a particular grinding medium is used in the refining kaolin composition process (page 8, line 9).

Regarding claims 30 and 31, Golley et al. disclose that the optimum amount of energy used in the refining process is in the range of 20kWh to 100 kWh per ton of kaolin (page 9, line 1).

Regarding claim 32, Golley et al. disclose that the degrittied kaolin composition is subjected to magnetic separator to remove minerals (page 14, lines 20-23).

Regarding claim 33, Golley et al. disclose that treatment such as magnetic separation, ozone, reduced-acid leaching, floatation, and selective floatation is performed before or after grinding (page 41, claims 19 and 20).

Regarding claim 34, Golley et al. disclose that the kaolin refining process can comprise of centrifuge operation of size separation to control less than 0.25µm particles amount in the composition (page 17, line 28-31 and page 18, lines 1-4).

Regarding claim 35, Golley et al. disclose a method of refining a raw degrittied kaolin slurry composition (page 14, line 20) having at least 50 weight % of particles having an esd less than 2µm (page 13, line 31 to page 14, line 1)) and a shape factor greater than 15 (page 13, line 26).

Regarding claim 36, Golley et al. disclose that the refined kaolin composition comprising 35 weight % of particles having an esd less than 0.25 µm (page 12, line 27).

Regarding claim 38, Golley et al. disclose a method of refining kaolin composition:

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1) Preparing a degrittied kaolin slurry (page 14, lines 20-23) composition having at least 50 weight % of particles having an esd less than 2 μm (page 13, line 31 to page 14, line);

2) Grinding the kaolin slurry composition by using an optimum amount of energy in the range of 20kWh to 100 kWh per ton of kaolin (page 9, line 1); and

3) Classifying the ground kaolin clay to obtain a composition comprising at least 80 weight % particles having an esd less than 2 μm (page 12, line 24). Golley et al. disclose a kaolin composition having a shape factor at least 50 (page 13, line 27).

The reference differs from Applicant's recitations of claims by not disclosing identical ranges. However, the reference discloses "overlapping" ranges(the particle size less than 1 micron is at least 72%) and close range (the shape factor range from about 32 to 49). However, "about " permits some tolerance. In re Ayers, 154 F 2d 182, 69 USPQ 109. The reference discloses overlapping and close ranges, and close and overlapping ranges have been held to establish prima facie obviousness.

Regarding claims 40-42 Golley et al. disclose that the refined kaolin composition having a shape factor at least 50 (page 13, line 27).

Regarding claim 43, Golley et al. disclose that the refined kaolin composition comprising 35 weight % of particles having an esd less than 0.25 μm (page 12, line 27).

Regarding claim 44, Golley et al. disclose that the refined kaolin composition slurry is spray-dried (page 16, line 19).

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Regarding claims 45 and 46, Golley et al. disclose that treatment such as magnetic separation, ozone, reduced-acid leaching, floatation, and selective floatation is performed before or after grinding (page 41, claims 19 and 20).

Regarding claim 55, Golley et al. disclose preparing a degrittied kaolin slurry (page 14, lines 20-23) composition having at least 50 weight % of particles having an esd less than 2 μm (page 13, line 31 to page 14, line) and dewatering kaolin slurry by one of the ways that is well known in the art such as evaporation (page 16, line 10) to obtain a kaolin composition comprising at least 80 weight % of particles with an esd less than 2 μm (page 8, line 24) and a shape factor at least 50 (page 13, line 27).

The reference differs from Applicant's recitations of claims by not disclosing identical ranges (the shape factor range from about 32 to 49). However, "about " permits some tolerance. In re Ayers, 154 F 2d 182, 69 USPQ 109. The reference discloses close ranges, and close ranges have been held to establish prima facie obviousness.

Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable by WO 00/59840 to Golley et al., further in view of U. S. Patent 6,186,335 to Arrington-Webb et al.

Regarding claim 37, Golley et al. disclose a method of refining kaolin composition comprising 35 weight % of particles having an esd less than 0.25 μm set forth above (col. 6, lines 25 and 26).

But they are silent about the kaolin composition comprising about 40 weight% of particles having an esd less than 0.25 μm as applicant set forth in claim 37.

However, it would have been obvious to one of ordinary skill in the art the time of invention by applicant to defining the kaolin particles to obtain a kaolin composition as applicant set forth in claim 37, motivated by the fact Golley et al. disclose that the desired amount of less than 0.25 μm particle in the composition can be obtained by varying the parameter of the centrifuge operation (size separation) (page 17, lines 28-29 and page 18, lines 1-4).

Response to Arguments

Applicant's arguments filed 03/23/2009 have been fully considered but they are not persuasive. The argument is mainly drawn to that the amended claims' range is outside the range of the prior art. The Examiner respectfully submits that the prior art disclose close or overlapping range. The reference discloses close ranges and overlapping range, and close ranges and overlapping range have been held to establish prima facie obviousness. Please see the rejection section.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHUANGYI ABU ALI whose telephone number is (571)272-6453. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J.A. LORENZO/

Supervisory Patent Examiner, Art Unit 1793

/Shuangyi Abu-Ali/

Examiner, Art Unit 1793